Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A copolymer formed by polymerizing propylene, 4-methyl-1-pentene, styrene, or another C_{4-20} α-olefin, and a copolymerizable comonomer in the presence of a composition comprising the admixture or reaction product resulting from combining:

(A) a first olefin polymerization catalyst comprising a complex comprising a transition metal selected from Groups 4-8 of the Periodic Table of the Elements and one or more delocalized, π-bonded ligands or polyvalent Lewis base ligands;~~,~~

(B) a second olefin polymerization catalyst capable of preparing polymers differing in chemical or physical properties from the polymer prepared by catalyst (A) under equivalent polymerization conditions~~;~~; and

(C) a chain shuttling agent.

2. (currently amended) A copolymer formed by polymerizing propylene, 4-methyl-1-pentene, styrene, or another C_{4-20} α-olefin, and a copolymerizable comonomer in the presence of a composition comprising the admixture or reaction product resulting from combining:

(A) a first olefin polymerization catalyst comprising a complex comprising a transition metal selected from Groups 4-8 of the Periodic Table of the Elements and one or more delocalized, π-bonded ligands or polyvalent Lewis base ligands, the first olefin polymerization catalyst having a high comonomer incorporation index;~~,~~

(B) a second olefin polymerization catalyst having a comonomer incorporation index less than 95 percent of the comonomer incorporation index of catalyst (A)~~;~~ and

(C) a chain shuttling agent.

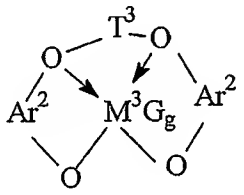
3-22. (canceled)

23. (currently amended) A copolymer according to claim 1 ~~or 2~~ wherein the shuttling agent is a trihydrocarbyl aluminum-or dihydrocarbyl zinc-compound containing from 1 to 12 carbons in each hydrocarbyl group.

24. (original) A copolymer according to claim 23 wherein the shuttling agent is triethylaluminum or diethylzinc.

25. (canceled)

26. (currently amended) The ~~A~~ copolymer according to claim 1 ~~claim 25~~ wherein catalyst (A) corresponds to the formula:



, wherein:

T^3 is a divalent bridging group of from 2 to 20 atoms not counting hydrogen; and

Ar^2 independently each occurrence is an arylene or an alkyl-or aryl-substituted arylene group of from 6 to 20 atoms not counting hydrogen;

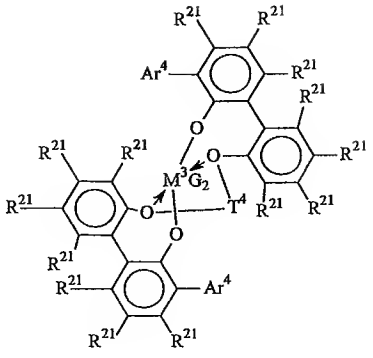
M3 is a Group 4 metal;

G independently each occurrence is an anionic, neutral or dianionic ligand group;

g is a number from 1 to 5 indicating the number of such X groups; and

electron donative interactions are represented by arrows.

27. (original) A copolymer according to claim 23 wherein catalyst (A) corresponds to the formula:



where M^3 is Hf or Zr;

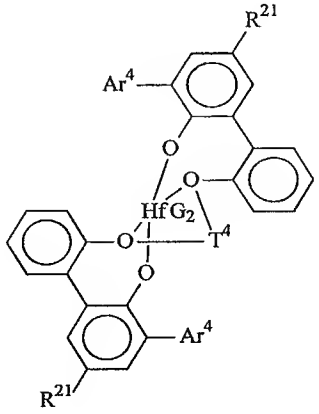
Ar^4 is C_{6-20} aryl or inertly substituted derivatives thereof, especially 3,5-di(isopropyl)phenyl, 3,5-di(isobutyl)phenyl, dibenzo-lH-pyrrole-1-yl, or anthracen-5-yl, and

T^4 independently each occurrence comprises a C_{3-6} alkylene group, a C_{3-6} cycloalkylene group, or an inertly substituted derivative thereof;

R^{21} independently each occurrence is hydrogen, halo, hydrocarbyl, trihydrocarbylsilyl, or trihydrocarbylsilylhydrocarbyl of up to 50 atoms not counting hydrogen; and

G, independently each occurrence is halo or a hydrocarbyl or trihydrocarbylsilyl group of up to 20 atoms not counting hydrogen, or 2 G groups together are a divalent derivative of the foregoing hydrocarbyl or trihydrocarbylsilyl groups.

28. (original) A copolymer according to claim 23 wherein catalyst (A) corresponds to the formula:



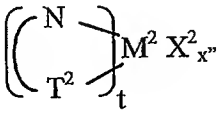
wherein Ar^4 is 3,5-di(isopropyl)phenyl, 3,5-di(isobutyl)phenyl, dibenzo-lH-pyrrole-1-yl, or anthracen-5-yl,

R^{2l} is hydrogen, halo, or C_{1-4} alkyl, especially methyl

T^4 is propan-1, 3-diyl or butan-1, 4-diyl, and

G is chloro, methyl or benzyl.

29. (currently amended) A copolymer according to claim 1 ~~or 2~~ wherein catalyst (B) corresponds to the formula:



wherein

M^2 is a metal of Groups 4-10 of the Periodic Table of the elements;

T^2 is a nitrogen, oxygen or phosphorus containing group;

X^2 is halo, hydrocarbyl, or hydrocarbyloxy;

t is one or two;

x" is a number selected to provide charge balance;

and T^2 and N are linked by a bridging ligand.

30-34. (canceled)